subject was a negro, apparently of middle age. There was no adventitious deposit in any other part of the body. The ring was found in the middle of the right axilla. It had no connection with the humerus or with the sheath of the artery, but is connected by its posterior surface with the sheath of the musculo-spiral nerve. The limb was well developed, and showed no signs of any interference with its function.

Fig. 1.

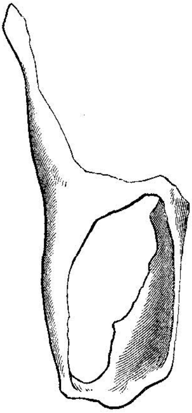
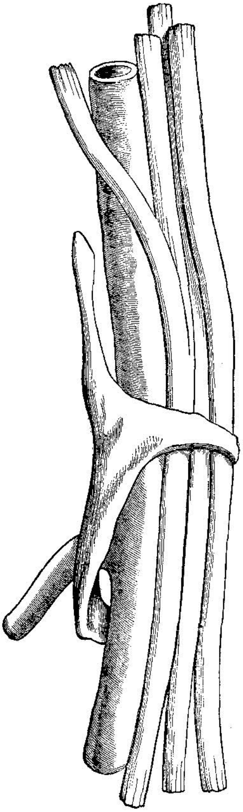


Fig. 2.



Curious bony deposits are known to occur occasionally in healthy tissues as well as in morbid products, and pieces of true bone of considerable size have been found imbedded in muscle (in the museum at Vienna there is a large egg-shaped piece of bone, which was taken out of the biceps of a woman's left arm), but I have not been able to find any record of a case at all like this. Its shape and position are very peculiar; and it is singular, too, that the pressure to which every motion of the arm must have subjected the nerves has had no apparent effect upon the limb.

Two Cases of Yellow Fever; one sporadic, the other imported.—Dr. LA ROCHE made the following remarks relative to these cases:—

My friend, Dr. Packard, is about to present to the Society the results of the post-mortem examination of two cases of yellow fever, which my official connection with the Board of Health afforded me the opportunity to notice —the first after death, the second during life. These examinations were made at my request, by Dr. Packard—the first with the assistance of our secretary, Dr. Kane. The history of both cases presents features of an interesting character; while, as you will perceive, the appearances revealed on dissection were sufficiently important to justify their being brought to the attention of the Society, and, indeed, of the profession at large.

The first case occurred in the practice of Dr. A. C. Bournonville, of this city, by whom it was reported to the Board of Health. It was a truly sporadic case (the disease not showing itself in a single other instance during the entire season), and, without a possibility of doubt, it must be regarded as of strictly local origin. The subject of it, a German, resided in Front Street below Coates, and worked in a board-yard situated at the foot of Green Street, on the Delaware front of the city. Some time previous to his attack he was employed on a raft conveying timber from the upper part of the river. He had not communicated, directly or indirectly, with any infected vessel from yellow fever ports; indeed, there was no such vessel to communicate with. He had not been within many hundred miles of a yellow fever case, from which he could, supposing the thing possible, have taken the disease; and had not been in any way exposed to the supposed morbific influence of fomites, whether in the form of merchandise or clothing. It may not be uninteresting to remark, in this connection, that at no great distance from the residence and place of work of the individual in question two sporadic cases (sporadic so far as regards that particular part of the city) occurred in 1853, and three or four a few years after.

The patient was visited by several of the medical members of the Board of Health, who are perfectly conversant with the yellow fever, and from their report of the cases; from the account of the symptoms, day by day, for which I am indebted to the attending physician, Dr. Bournonville; as also from the character of the matters ejected from the stomach and passed off by the bowels, no doubt can be entertained relative to the yellow fever nature of the disease. Indeed, could such a doubt have crossed the mind of any one during the progress of the case, it must necessarily have been dissipated by a view of the body after death, and especially by the inspection of the organs, the implication of which is admitted to characterize the said disease.

The patient was attacked early on the morning of Saturday, September 1, with a chill, followed by high fever, attended with severe pain in the back, arms, legs, and head. These symptoms, together with delirium at night, thirst, grayish diarrhœa, and epigastric pain, continued, with greater or less severity, till Tuesday, when the pulse fell to sixty, and presented some intermittence; the surface of the body became cold, and vomiting set in. The next day the conjunctiva became yellow, petechial spots supervened, and suppression of urine soon after attracted attention. The jaundice from this time gradually spread over the body, and increased in intensity. To these were added, on Friday, black vomit (some ounces of which were sent by Dr. Bournonville to the Board of Health), and, successively, black, tar-like stools, vomiting of unchanged blood, hemorrhage from the gums, and other symptoms equally characteristic. I must, while on the subject of symptoms, call your attention to the circumstance that in this patient the suppression of urine, which, as already stated, occurred on the third day, did not, as is usually observed in fatal cases, continue to the close of life.

Dr. B. writes on the fourth day that the patient "has not passed water for two days; no indication of the presence of urine in the bladder." On the fifth the doctor says: "Has not passed his urine; no discomfort on that account." At the close of the same day the doctor passed a catheter, and drew off two tablespoonfuls of thick, oil-like urine. The next day he again resorted to the catheter, and removed a wineglassful of yellowish-brown urine. On the eighth day about a gill of dark yellow urine, more limpid than the former portion, was removed. The next day, Sunday (ninth day), in the afternoon, Dr. B. "drew off 1¼ pint of thin, dark urine." The same quantity was drawn off the next day; and, as we shall see presently, the bladder was found, on dissection, to contain about a gill of fluid.

The case lingered till 11 o'clock P. M. on Monday, the tenth day, when he died at the City Hospital, whither he had been removed a short time previous, in order to allay the excitement produced in the vicinity of his residence by his presence.

The second case occurred in the person of one of the crew of the U. S. steamer Water-Witch, which arrived at the Lazaretto on the last day of September, from the south side of the island of Cuba. During the passage the Water-Witch lost two men with decided and unmistakable yellow fever, and, on reaching the quarantine station, landed five cases—four with a mild but well-marked form of the disease, while the other, the subject of the present remarks, who at his admission in the hospital had reached the fifth day of the attack, exhibited a combination of symptoms of a most formidable character. The appearance of the disease in the above-mentioned vessel presents some points of interest to which I must be allowed to invite your attention for a few moments. The Water-Witch lay for some time at anchor at the distance of about a mile from the port of Cienfuegos. While there, boats were sent to the town morning and evening each day—in the morning for provisions, and in the evening to convey the officers. No yellow fever prevailed in the place or among the shipping, which, unlike the Water-Witch, were anchored at the wharves, and consequently close to the town. No sickness occurred on board of the latter vessel, except a few cases of ephemeral fevers (*calenturas*), presenting none of the characteristic symptoms of, and in no way to be confounded with, yellow fever.

The vessel next went to the Isle of Pines, the healthiest spot in all Cuba, and where, so far as I can learn, yellow fever seldom, if ever, originates. There, however, the disease broke out in the vessel, and, after the occurrence of several cases, the captain determined to bring his vessel to the United States, in order thereby to arrest the further progress of the infection. Now, it was matter of observation that, with one solitary exception, none of the men attacked, whether at the Isle of Pines or on the passage home, had been ashore at Cienfuegos, or had manned the boats that plied from the vessel to that place mornings and evenings. Hence, even had the disease prevailed in the town or among the shipping—which, as we have seen, was not the case—those that sickened could not have taken it there. The exceptional case was not the first to suffer, and had so mild an attack as to leave a strong doubt as to the disease being the true yellow fever. I may mention that it is equally certain that though the first cases occurred at the Isle of Pines, they could not, for the reason stated, have originated from a poison derived from that place. My opinion is, and I give it for what it is worth, that the poison originated on board. One thing is certain, that all the cases were traced to the same part of the vessel—the fore division of the main deck, in the vicinity of the galley. This part is small—

much, very much too small for the number of men confined in it, considering, especially, the climate of the region where the vessel was cruising, and the additional heat issuing from the galley. It is, besides, low, badly ventilated, and near the pumps and hatches, from which issued a highly offensive smell, proceeding from the hold.

Of the symptoms noted during the progress of the cases in question I shall say little more than that they could not be referred to any other disease. They were so referred, not only by myself, but also by the medical officer of the vessel, Dr. Engles, by Dr. Filbert, of the Lazaretto, and by my excellent friend, Dr. Dickson, who saw the patient at my request, and whose familiarity with all the forms of yellow fever renders his opinion relative to its diagnosis of the utmost value. All I need add, in this connection, is, that the disease was protracted to the tenth day; that the jaundice was less marked than in the preceding case; that the black vomit was late in making its appearance, but at last assumed its usual characteristics; and that the suppression of urine, after continuing several days, ceased, a fair quantity of fluid being drawn several times a day by the catheter.

1. *Case of Sporadic Yellow Fever.* Examined at the City Hospital, September 11, 1860. Present, Drs. La Roche, Jewell, McCrea, Bell, Kane, and Bournonville.—Rigor mortis very well pronounced. Body yellow, with a good deal of congestion of posterior surface and extremities. A quantity of dark liquid was oozing from the nose, and a flow of yellow, frothy mucus, tinged with blood, took place when the body was moved.

The areolar tissue, subcutaneous, submucous, and subserous, was universally tinged deep yellow, and was remarkably firm. In the costal cartilages it was evident that this tinging was confined to the perichondrium.

Both *lungs* were healthy, but hypostatically congested; the pleuræ full of deep yellow serum. The *heart* was of good size, and its lining membrane stained yellow; its tissue was degenerated, the change being perhaps fatty, but with a granular appearance under the microscope. The pericardium was deeply tinged yellow, and contained about f℥j of very yellow serum; at one portion of its parietal layer there was a spot of well-marked extravasation. The left cavity of the heart contained a firm yellow clot; the right auricle was distended with a very large clot, of a dark, currant-jelly-like appearance. Both the aorta and the pulmonary artery were stained red.

The *stomach* contained a black or very dark brown grumous matter, and its mucous membrane presented here and there patches of extravasation. The *duodenum* seemed congested and softened, the rest of the intestine healthy. The *liver* had a decidedly fatty appearance, but did not exhibit to the full extent the oil-globules when examined microscopically; its colour was very light, and its tissue easily torn. The gall-bladder was distended with intensely black viscid bile. The portal vein was distended with fluid blood. The *spleen* had externally a greenish colour, from the yellow tinge of its capsule; its pulpy substance was very red and soft. The *kidneys* were enlarged and congested, the supra-renal capsules apparently healthy. Some enlarged glands were noticed around the pancreas.

2. *Case of Yellow Fever, from U. S. Steamer Water-Witch.* Examined at the Lazaretto, October 3, 1860, with Dr. Engles, U. S. N.—Body examined twenty-two hours after death; very muscular and well formed. It was not yet cold, although the rigor mortis was very well pronounced. The surface was somewhat tinged yellow, and there was slight ecchymosis in the posterior portions, in the ears, penis, and scrotum, not much in the

extremities. About the mouth there was a quantity of dark brownish foam. On lifting the body, and changing the position of the head, a copious flow of bright red blood, apparently arterial, took place from the nostrils.

Thorax.—Old pleuritic adhesions were found at the lower part of the right lung. Both *lungs* were healthy, but presented an intense degree of hypostatic congestion. The *pericardium* was distended with air, a circumstance I do not remember ever observing before, and which I cannot easily explain. The *heart* was healthy in appearance, but its texture seemed degenerated. A microscopic examination subsequently made, with Drs. Darrach and Da Costa, showed that it had undergone fatty change, as was the case also with the liver. Both the aorta and pulmonary artery were deeply stained red. The blood was everywhere entirely fluid.

Abdomen —*Liver* fatty in appearance; gall-bladder excessively distended, and stained with intensely black viscid bile. *Stomach* deeply congested at its lesser curvature; towards its cardiac extremity its mucous membrane presented a dark greenish colour, with an appearance here and there of minute white vesicles. *Duodenum* slightly congested; *intestines* not decomposed at all, but congested at some places for a considerable distance; they were full of a dark, viscid, tarry matter; the solitary glands were enlarged, as were also the lymphatic glands of the mesentery. Peyer's patches were healthy. The *spleen* was rather large, intensely congested, and almost diffluent. The *kidneys* were flabby, but not otherwise abnormal. On the external surface of the supra-renal capsules there was noticed some injection of the vessels.

I shall add but a few words to what you have just heard. In regard to the condition of the liver, you will notice that in neither of the cases did the organ exhibit the fatty degeneration to the extent it generally does in fatal cases of the disease under consideration. Nevertheless, it was in both decidedly oily; at any rate, sufficiently so, in all respects, to justify us in adhering firmly to the opinion, now very generally entertained, that this condition of the liver ranks among the main, if it is not *the* most important, of the anatomical characters of the disease. I may mention that in both instances additional proofs were obtained of the correctness of the opinion that the change is due to a fatty and not to an amyloid degeneration, as suggested by Prof. Joseph Jones, of Georgia, and maintained, at one time at least, by Prof. S. Jackson, of this city. This fact, so far as I can ascertain, was first experimentally demonstrated by our fellow-member, Dr. Da Costa, in a case from the West Indies, which was admitted, under his care, in the Episcopal Hospital some two years ago (August, 1858). In this instance, as in the two before mentioned, the oily matter was partially dissolved by ether, and not acted upon by iodine or sulphuric acid.

In both cases before us this evening the heart was found granular. This condition of the heart in fatal cases of yellow fever was, so far as I can ascertain, first pointed out by Prof. Riddell, of New Orleans. By him it is looked upon as the result of the molecular disarrangement of the muscular fibres of the organ, in virtue of which those fibres lose their natural structure, and assume the non-striated or granular aspect. "In general," as he remarks, "the molecular change is either complete or well marked, rarely it is very slight or imperceptible." "The molecular degeneration of the heart, unlike the fatty change of the liver, can always be satisfactorily made out, affirmatively or negatively, with a good microscope. It is on this account, perhaps, that in fatal cases of yellow fever the molecular change in the heart has appeared to me to be a lesion much more constant than fatty degeneration of the liver."

Whatever may be the fact relative to the frequency of the change in question, I very much doubt the correctness of the conclusion at which Prof. Riddell has arrived, that it is more constant in the cases mentioned than fatty degeneration of the liver, inasmuch as I did not fail to discover this last lesion in the many autopsies I witnessed in 1853 and 1854, and some I have had occasion to witness since. I know, besides, that the same result has been obtained by pathologists in other places in this country and abroad, and more especially, and on a large scale, in Lisbon, during the severe epidemic by which that city was visited in 1857. Dr. Lyons, the able historian of that epidemic, does not use on the subject language calculated to make us conclude that the change was there only of occasional occurrence, or yielded to any other in point of frequency. His words are worth recording. "The most remarkable, the most constant, and, to my mind—I will frankly avow it—the most inexplicable condition presented in the *post-mortem* examination of fatal yellow fever cases, was the state of the liver. I believe it may be affirmed that *some departure from the normal state of this organ was an absolute condition in all cases which proved fatal.* It was not only so with regard to the cases examined by myself, but the concurrent testimony of all my learned confrères in Lisbon pointed to the same result." "The fawn-yellow coloration usually well indicated the change that had taken place in the hepatic tissue; but it was not only in those cases in which the liver presented this coloration that abnormal states of the hepatic structure existed. The yellowish-brown colour—'chocolat au lait'—was attended with similar and fully as well-marked changes. The same may be said of the nutmeg condition of the organ, and even, to some extent, of several cases in which the ordinary liver-brown colour was unchanged."

"Minute fine sections, or matter scraped from the hepatic texture, exhibited the hepatic cells filled with globular oily and fatty matter. The natural appearance of the cell was completely altered, its outline obscured, and its nucleus rendered invisible. It was surcharged with molecular and globular oily matter, while the whole field and the interspaces between the cells were filled with similar and equally abundant oily and fatty elements, were in fact dissipated, and the contour of the cells brought more clearly into view; but it was only rarely that the nucleus could, by long treatment in ether, be made visible."

In view of what precedes, I cannot conceive how the above-mentioned change of texture of the heart can justly be said to be much more constant in fatal cases of yellow fever than the fatty degeneration of the liver. How a particular pathological condition of a given organ can present itself more constantly in the aforesaid disease than the lesion of another organ which is always found on the dissection of subjects who have died of the same disease, is a puzzle, the solution of which I leave to others. But while unwilling, from all I have seen myself or learned from others, to admit that the change in the liver is less frequently noticed in fatal cases of yellow fever than the above-mentioned granular condition of the heart, I cannot but be disposed to regard the latter, I will not say as a pathological change of constant occurrence in such cases—in other words, in the light of an anatomical character of the disease—but certainly as one very frequently noticed, and which deserves serious consideration in a pathologico-diagnostic point of view.

I lay no stress on the circumstance that Dr. Lyons, though describing the condition in which he found the heart in his dissections at Lisbon, says nothing of the one under present consideration, inasmuch as, from his silence on the subject, we cannot conclude that it did not exist. At least such is my belief, founded on the fact that we are nowhere told by that pathologist that he examined the substance of the heart in the only way in which the granular deposits can well be discovered—namely, under the microscope. Be this, however, as it may, this particular morbid change was noticed by Dr. Da Costa in the case already mentioned as having occurred in the Episcopal Hospital. I hasten to state that Dr. Da Costa was not at the time aware of Prof. Riddell's observations on the subject. Dr. D. was kind enough, knowing the interest I take in all matters connected with the yellow fever, to show me the specimen in his possession. I have since seen the same change in another specimen exhibited to me by a friend. Dr. Da Costa, I am told, has also again seen it; and now we find it in both of the cases to which your attention has been invited this evening.

In conclusion I have to state that Dr. Riddell says nothing of the nature or composition of the aforesaid granules. To Dr. Da Costa credit is doubtless due for having decided the question. In the Episcopal Hospital case the heart was found soft and flabby; the muscular fibres were exceedingly granular; here and there oil-drops were seen; the striæ of the muscle were observed; and the granules were to a great extent soluble in ether, but not in acetic acid. I was fortunate enough to witness this examination and experiment, and, were it necessary, which we all know is not the case, could vouch for the truthfulness of the above statement. The same result was obtained in both instances before us. The conclusion from this is that the granules are fatty, the consequence of a commencement of fatty degeneration. I have no hesitation in claiming for Dr. Da Costa credit for the discovery of that fact.

Nov. 28. *Medullary Cancer of the Liver.*—Dr. CHARLES C. LEE presented a specimen of this, with the following observations: The subject of this case was a girl, 22 years of age, born in Glasgow, Scotland. Her father died four years ago, in his sixty-seventh year, of *cancer of the breast*, as she was told by the physician who attended him; her mother and the rest of her family were healthy. The patient herself had no recollection of any ill health before her twelfth or fifteenth year, when she contracted a severe cough. This continued three years, when she came to Philadelphia for medical advice, and was admitted to the Pennsylvania Hospital in June, 1859. Here she remained several months, recovering in some degree from her cough, which, however, returned after she left the hospital, and in the beginning of last January she entered the medical wards at Blockley for the same trouble. In a fortnight she was much better, and was discharged to the out-ward, or almshouse proper; but on the 5th of May she was sent back, with a severe attack of jaundice, accompanied by sharp, lancinating pains in the hepatic region. From that time until her death, on the 24th of November, menstruation was completely arrested, and her health generally became deranged. Although subjected to various plans of treatment by Drs. Da Costa, Judson, and Ludlow, who successively had charge of the case, the liver advanced steadily in size, gradually extending above the ensiform cartilage, and downwards to within a quarter of an inch of the umbilicus, behind to the spinal column, and deeply into the left hypochondriac region in front. Over this space the skin was exceedingly tense; the